

Vetoing incoherent events

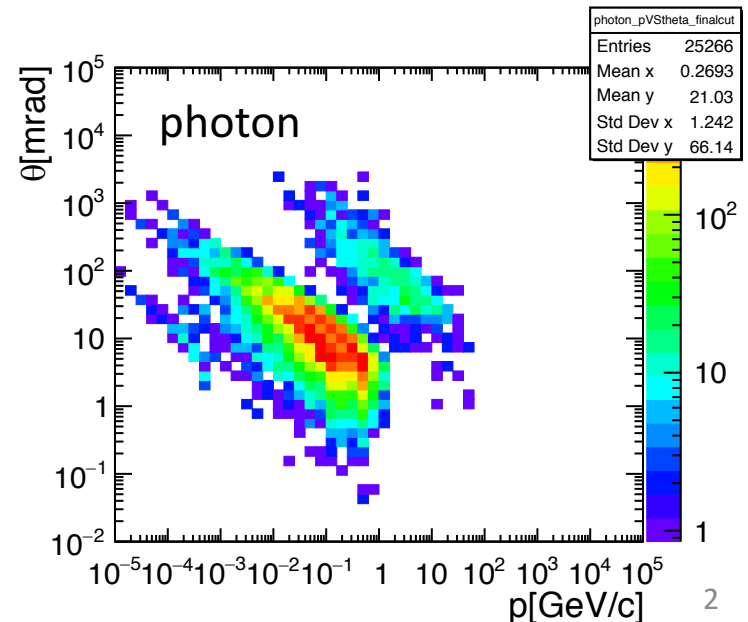
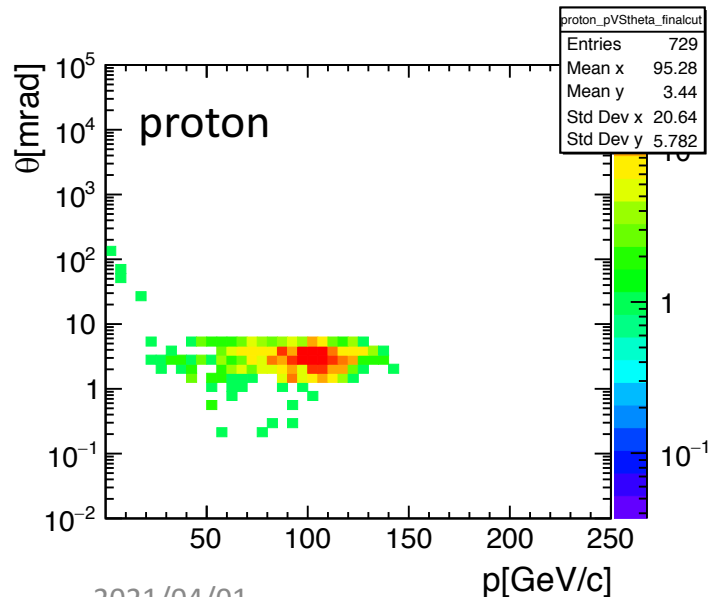
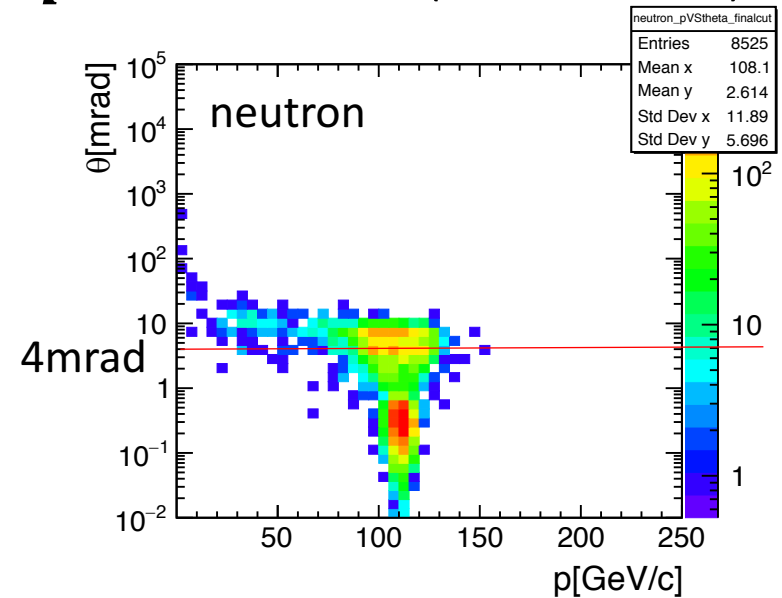
Wan Chang

2021.04.01

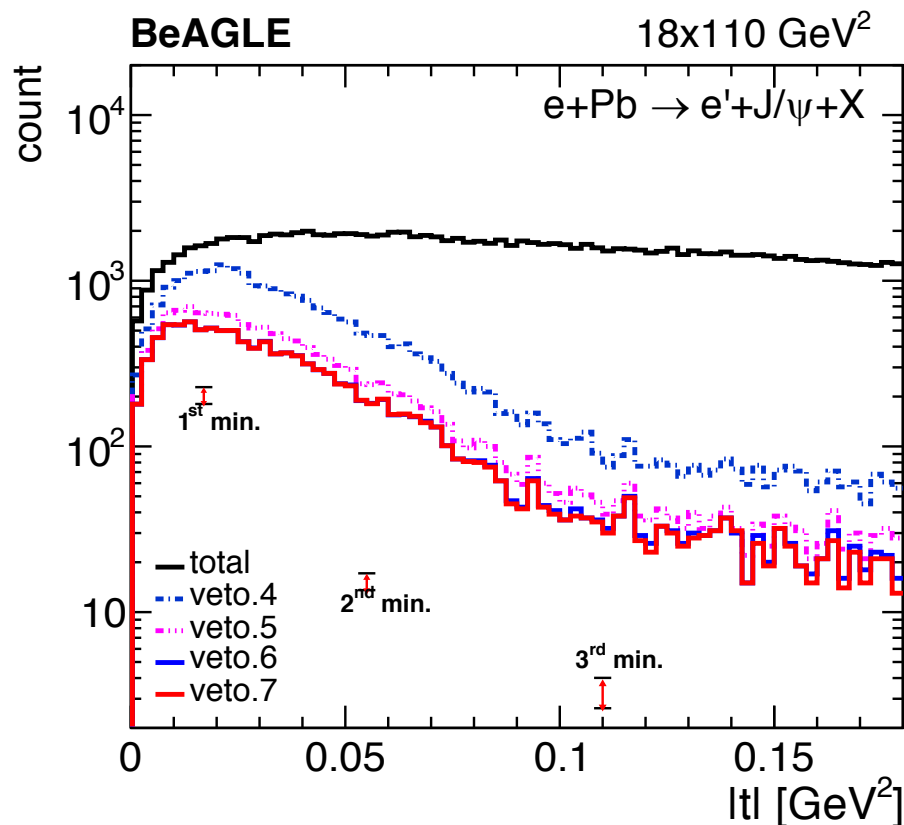
Protons, neutrons and photons θ vs. p distribution (after Cut 6)

The θ vs. p distribution after vetoing neutrons, protons and photons in the far forward detectors.

The ZDC has an acceptance of $< 4\text{mrad}$, so why have still events with neutrons in this acceptance at high Energy, the same for the photons?



Vetoing Incoherent Events



Veto.5:

➤ Veto4 + no anything in preshower

Veto.6:

➤ Veto5 + no photon $E > 50 \text{ MeV}$ in ZDC

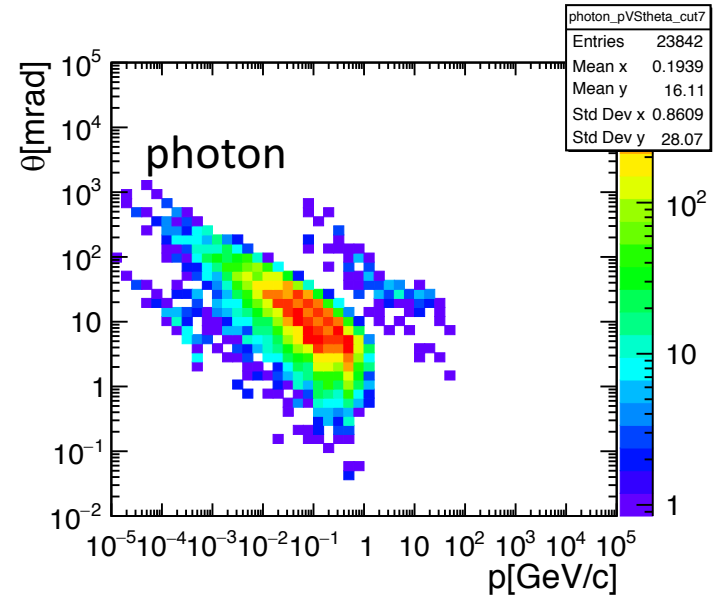
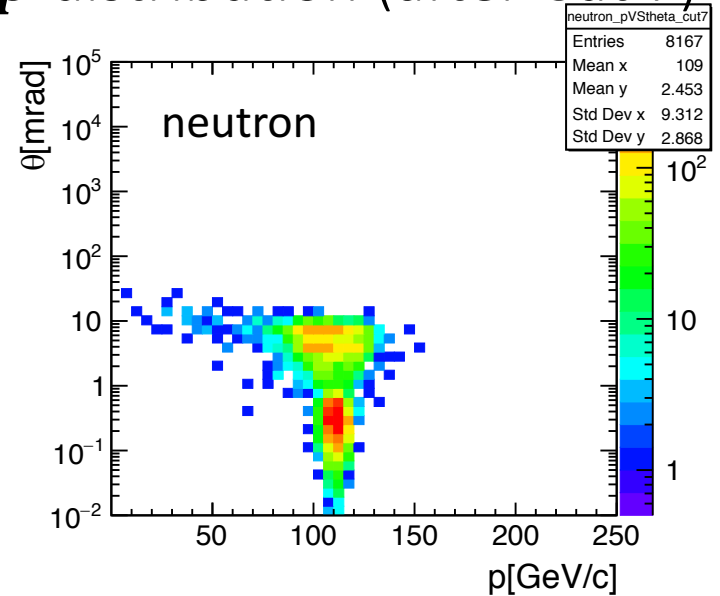
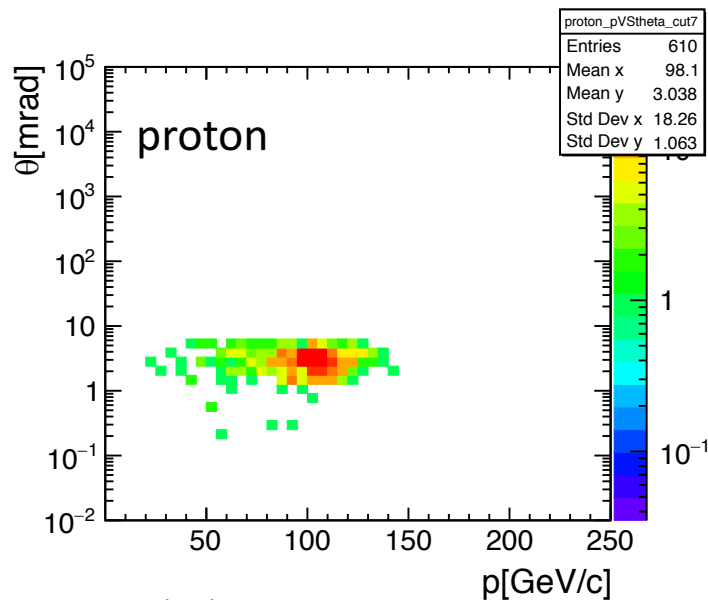
Veto.7:

➤ Veto6 + no activities ($|\eta| < 4.0$ & $p_T > 100 \text{ MeV}/c$ & $E > 50 \text{ MeV}$) other than e- and J/Psi in the main detector

Survived event count		
Total events	250000	100%
Cut1	42026	16.81%
Cut2	42026	16.81%
Cut3	40734	16.29%
Cut4	39415	15.77%
Cut5	18324	7.33%
Cut6	14551	5.82%
Cut7	14203	5.68%

Protons, neutrons and photons θ *vs.* p distribution (after Cut 7)

The θ *vs.* p distribution after vetoing neutrons, protons and photons after Cut 7.



Protons, neutrons and photons θ *vs.* p distribution (after Cut 6)

Without beampipe

The θ *vs.* p distribution after vetoing neutrons, protons and photons in the far forward detectors.

